

IN THE CLAIMS:

Claims 1-5, 13-16 and 20 have been amended herein. Please note that all claims currently pending and under consideration in the referenced application are shown below, in clean form, for clarity. Please enter these claims as amended. Also attached is a version with markings to show changes made to the claims.

E' cancel

1. (Four-times Amended) An apparatus for assisting in compressing video data in a computer system including a central processing unit and a system memory, comprising:

- a video input port, for receiving video data for a current video frame;
- a video input buffer coupled to the video input port, for storing video data from the video input port;
- a previous frame buffer, for storing at least a portion of a previous video frame;
- an operation unit coupled to the video input buffer and the previous frame buffer, for computing a difference frame from data from the video input buffer and data from the previous frame buffer; and
- a result buffer coupled to the operation unit, for temporarily buffering the difference frame prior to storing the difference frame in the system memory, the apparatus configured to operate within a north bridge chip of the computer system to enable the central processing unit to retrieve the difference frame directly from the system memory via the north bridge chip for further compression of the video data by the central processing unit.

E' cancel

2. (Amended) The apparatus of claim 1, including a memory port coupled to the previous frame buffer and the result buffer, for transferring data to and from the system memory that stores video data from the video input port and result data from the result buffer.

3. (Amended) The apparatus of claim 2, wherein the system memory couples to the memory port for storing the video data from the video input port and the difference frame from

the result buffer, wherein the video data is stored to in a current frame area in the system memory and the difference frame is stored in a difference frame area in the memory.

E2
cancel

4. (Amended) The apparatus of claim 3, wherein the memory stores a current video frame and a previous video frame in the same location in the system memory, allowing the current video frame to be written over the previous video frame.

5. (Amended) The apparatus of claim 3, wherein the system memory also stores instructions and data for the central processing unit of the computer system.

6. (Unchanged) The apparatus of claim 1, wherein the operation unit performs an exclusive-OR operation between data from the video input buffer and data from the previous frame buffer.

7. (Unchanged) The apparatus of claim 1, wherein:
the video input buffer stores a block of data from the video input port;
the previous frame buffer stores a block of data from the previous video frame;
the result buffer stores a block of data from the operation unit; and
the operation unit performs an operation between a block of data from the video input port and a block of data from the previous frame buffer.

Claim 8 was previously cancelled

9. (Unchanged) The apparatus of claim 1, wherein the apparatus comprises part of a video conferencing system.

10. (Unchanged) The apparatus of claim 1, including additional resources within the apparatus, from compressing the video data from the video input port.

11. (Unchanged) The apparatus of claim 1, including a color space conversion circuit coupled between the video input port and the video input buffer.

12. (Unchanged) The apparatus of claim 1, wherein the video input buffer is a register that stores less than one video frame.

13. (Four-times Amended) An apparatus for compressing video data in a computer system including a central processing unit, comprising:

a video input port, for receiving video data for a current video frame;

a video input buffer coupled to the video input port, for storing video data from the video input port;

a previous frame buffer, for storing at least a portion of a previous video frame;

an exclusive-OR unit coupled to the video input buffer and the previous frame buffer, for computing a difference frame from data from the video input buffer and data from the previous frame buffer;

a result buffer coupled to the exclusive-OR unit, for temporarily buffering the difference frame;

a memory port coupled to the previous frame buffer and the result buffer; and

a system memory coupled to the memory port for storing the video data from the video input port and the difference frame from the result buffer, wherein the video data is stored to in a current frame in the memory, the apparatus configured to operate within a north bridge chip of the computer system to enable the central processing unit to retrieve the difference frame directly from the system memory via the north bridge chip for further compression of the video data by the central processing unit.

E3
cancel

E4
cancel

14. (Amended) The apparatus of claim 13, wherein the system memory stores a current video frame and a previous video frame in the same location, allowing the current video frame to be written over the previous video frame.

15. (Amended) The apparatus of claim 13, wherein the system memory stores instructions and data for the central processing unit of the computer system.

16. (Amended) The apparatus of claim 13, wherein:
the video input buffer stores a block of data from the video input port;
the previous frame buffer stores a block of data from the previous video frame;
the result buffer stores a block of data from the exclusive-OR unit; and
the exclusive-OR unit performs an exclusive-OR operation between a block of data from the video input port and a block of data from the previous frame buffer.

Claim 17 was previously cancelled

18. (Unchanged) The apparatus of claim 13, wherein the apparatus comprises part of a video conferencing system.

19. (Unchanged) The apparatus of claim 13, including a color space conversion circuit coupled between the video input port and the video input buffer.

E5
cancel

20. (Four-times Amended) A computer system including resources for compressing video, comprising:
a central processing unit and system memory for further compressing the video within the computer system;

*E5
concl.*

a video input port, for receiving video data for a current video frame;
a video input buffer coupled to the video input port, for storing video data from the video input port;
a previous frame buffer, for storing at least a portion of a previous video frame;
an operation unit coupled to the video input buffer and the previous frame buffer, for computing a difference frame from data from the video input buffer and data from the previous frame buffer; and
a result buffer coupled to the operation unit, for temporarily buffering the difference frame prior to storing the difference frame in the system memory, the video input port, the video input buffer, the previous frame buffer, the operation unit, and the result buffer configured to operate within a north bridge chip of the computer system to enable the central processing unit to retrieve the difference frame directly from the system memory via the north bridge chip for further compression of the video data by the central processing unit.
